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BLATTODEA AND DERMAPTERA COLLECTED BY MR. R. J. H. KAULBACK'S EXPEDITION TO TIBET

By G. Bey-Bienko, D.Sc.

(*Institute of Plant Protection, Leningrad.*)

(Communicated by Dr. B. P. Uvarov, F.R.E.S.)

The collection of Blattodea and Dermaptera made by Mr. R. J. H. Kaulback in Tibet during 1935–36 and kindly submitted to me for study by Dr. B. P. Uvarov contains twenty-six specimens, representing four species of Blattodea and three species of Dermaptera. Two species of the Blattodea are described as new, one of them belonging to an undescribed genus.

The collection belongs to the British Museum (Natural History), London, where the types of the new species are preserved.

Blattodea.

Margattea Shelf.

1911. *Margattea* Shelford, *Ent. mon. Mag.*, (2) **22** : 155 (genotype *Blatta ceylanica* Sauss. 1868, from Ceylon).
1929. *Kuchinga* Hebard, *Proc. Acad. nat. Sci. Philad.*, **81** : 39, 41 (genotype *Phyllodromia longealata* Brunn. 1898, from Sarawak).
1931. *Margattea* Rehn, *Trans. Amer. ent. Soc.*, **57** : 302 (redescription of the genotype).

A careful study of both genotypes determined by the late R. Shelford and deposited in the Zoological Institute, Leningrad. [1 ♂ of "*Phyllodromia*" *longealata* Brunn. from Kuching, Sarawak (Dyak coll.) and 1 ♂ and 1 ♀ of "*Phyllodromia*" *ceylanica* Sauss. from Ceylon (O. John coll.)], shows that there is no need for Hebard's genus *Kuchinga*. The two genotypes are quite similar in the venation of elytra and wings, maxillary palpi proportions, armament of the anterior femora, in the structure of the tarsi (in both species covered with fine bristles, tarsal claws equal, unspecialised) and even in general outlines of the head. The same opinion was recently expressed by Hanitsch (1931 *Ann. Mag. nat. Hist.*, (10) **7** : 392).

Margattea inermis sp. n.

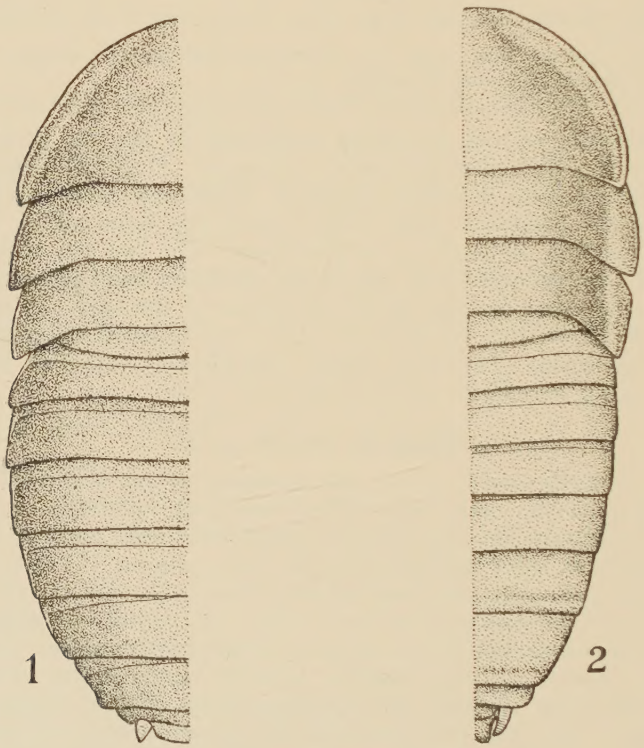
♀. Body relatively small. Vertex with interspace between eyes equal in length to vertical depth of an eye; ocular region of head broadened, with lateral margins convex; facial part with sides straight, indistinctly convergent downwards; maxillary palpi slender, proportions of three apical segments (from the 3rd to 5th) as 1 : 1 : 0·8, 3rd segment cylindrical, 4th moderately broadened apically, 5th broader than the preceding ones. Pronotum one and one-third times as broad as long, with very distinct impression placed at the middle of posterior half of disc; lateral margins regularly arcuate; anterior margin very slightly arcuate, practically straight; posterior margin without distinct median production, practically straight; latero-posterior angles distinct, obtuse, moderately rounded. Elytra and wings fully developed, the former distinctly narrowing apically, 3·4 times as long as broad; costal veins 16 in number, R ("discoidal" vein) typical for the genus, not forking in the median part; anal field a little longer than one-third of elytral length (as 1 : 2·6). Wings with very distinct but not large apical triangle; costal clubbed veins 14 in number; R simple, straight, CuA ("ulnar" vein) with 2 or 3 complete branches (distal part of wing is damaged). Anterior lower margin of anterior femora without thick spines in median part but with an elongate row of closely placed pyliform spines (type C), terminating in two large distal spines; posterior lower margin of the same

femora armed with only two delicate spines in the apical fourth; lower margins of all other femora with sparse delicate spines; tarsi with fine bristles; areola well developed; tarsal claws quite symmetrical, unspecialised. Last abdominal tergite very short, slightly produced on the middle of hind margin, with a feeble median notch; last sternite large, hind margin between bases of cerci slightly rounded.

Upper surface of body, *i.e.*, pronotum and elytra, ochraceous, with a feeble orange tinge; elytra with immediate apex darkened, brown; wings with costal field ochraceous, apical part of preanal area brown, anal area moderately infumated. Lower surface of body, including maxillary palpi; legs and cerci, brownish-black; spines on legs yellowish. Length of body ♀ 8·5, pronotum 2·3, elytra 9·1, total length 11·2 mm.

S.E. Tibet: Zayul, 7–12,000 ft., summer 1935, 1 ♀ (type) (*R. J. H. Kaulback*).

This species represents a specialised and aberrant member of the genus *Margattea*, characterised by type C armament of the anterior femora instead of type B. The present knowledge of the genus is, however, insufficient, and therefore I hesitate to describe a new genus on the female sex alone.



Figs. 1–2.—*Glomerexis tibetana* sp. n.

The known range of the genus is the Indo-Malayan and Ethiopian regions, and the discovery of a member of the genus in Tibet demonstrates a tropical origin of some faunistic elements of Tibet. *Margattea inermis* sp. n. unquestionably represents (as does *Glomerexis tibetana* gen. et sp. n. described below) a specialised and transformed derivative of the Tertiary tropical fauna of Tibet.

Glomerexis gen. n.*

Related to *Pseudoglomeris* Brunn. (PERISPHAERIINAE) but differs as follows.

Body completely apterous in both sexes. Vertex with eyes much separated, interspace between them a little broader than width of the 1st antennal segment, ocelli absent in both sexes. Typical carina on the lower surface of pronotum distinct, but its hind end simple, not produced into a tooth. Pronotum similar in both sexes, its latero-posterior angles well developed, slightly produced backwards; meso- and metanotum with lateral parts triangularly produced backwards. Genicular spines on the middle and hind femora very small; anterior lower margin of the middle and hind femora with a strong triangular apical tooth, more developed on hind femora. Abdomen without lateral impressions on the 3–7th tergites; upper surface in ♂ quite flat, in ♀ convex; transverse sulci on 2–4th tergites distinct, on 5–6th tergites feeble and practically concealed, on 7th tergite quite absent.

Genotype *Glomerexis tibetana* sp. n.

Glomerexis tibetana sp. n. (figs. 1 and 2).

♂ (type). Size medium (for the group), form markedly flattened and regularly narrowing from the mesonotum to the apex of abdomen. Head with greatest depth scarcely greater than width across eyes; face with scattered impressed points, without transverse concavity between antennal bases; palpi short, proportions of three distal segments (from 3rd to 5th) as 1 : 0·56 : 0·77; 3rd segment cylindrical; preapical segment moderately widened apically; apical segment thick, inflated. (Antennae broken off.) Pronotum (the left part of which is not completely developed and was probably damaged during the life of the insect) with relatively sparse impressed points, about twice as broad as long; median part moderately convex; lateral parts distinctly expanded, practically flat, latero-posterior angles moderately produced; hind margin distinctly biconcave. Meso- and metanotum taken together a little shorter than pronotum, with denser punctation; hind margins practically straight in the median part of their width; latero-posterior angles more acutely produced than those of pronotum; surface convex, with lateral parts flattened. Legs relatively short, markedly flattened; upper surface of hind tibiae with 13 spines, triseriately arranged, but median row includes 3 spines only; hind tarsus subequal in length to the corresponding tibia. Abdomen strongly deplanate, with both upper and lower surfaces flat; the whole upper surface and basal part of the lower surface coarsely punctured, with irregular and not very distinct transverse rugosities; hind margin of the 2nd tergite slightly concave in median part; 3–7th tergites with hind margins straight, their latero-posterior angles not angularly produced; supra-anal plate about twice as broad as long, median part of hind margin straight, latero-posterior parts rounded, not angular; cerci short, subconical, slightly incurved, not reaching the apex of the supra-anal plate, segmentation distinct; last sternite ("subgenital plate") without styles, moderately transverse, narrowing apically, strongly asymmetrical, dextral part considerably excavated, with margins of that part membranous.

♀. Very similar in general habitus to the same sex of *Pseudoglomeris planiuscula* Sauss. Form ovate, strongly convex above, deplanate below. Pronotum with upper surface polished, with indistinct, feebly impressed but relatively dense points; almost twice as broad as long, hind margin indistinctly biconcave. Meso- and metanotum as in the male sex, punctation more distinct than that on the pronotum. Legs as in the male sex, but hind tibiae with 12 spines on the upper surface. Abdomen with relatively dense, not very deep punctation; almost parallel-sided in basal half; hind margins of the 2–4th tergites slightly convex in median part; latero-posterior angles of the 6–8th tergites not

* *i.e.* resembling the genus *Glomeris* (Isopoda).

produced posteriorly; supra-anal plate a little more than twice as broad as long, hind margin slightly arcuate, latero-posterior angles distinct but rounded; cerci very short, conical, with indistinct segmentation; last sternite slightly more than twice as long as broad, lateral margins to infra-cercal excision straight, strongly convergent, hind margin (between infra-cercal excisions) quite straight in median part.

Coloration uniformly black, shining, especially in the female sex. Head entirely black; maxillary palpi dark brown; antennae (in the female sex) brownish-black, with apical part dirty-brown. Legs brownish-black. Cerci rufous; supra-anal plate in ♂ dirty-yellowish. Length of body ♂ 19·8, ♀ 20; pronotum ♂ 4·8, ♀ 5·3; hind tibia ♂ 5·5, ♀ 4·4; maximum width of pronotum ♂ *ca.* 8·5, ♀ 9 mm.

E. Tibet. Dzogang, 9–12,000 ft., 13–21.ix.1936, 1 ♂ (type) and Poshö, 9–12,000 ft., 12–18.viii.1936, 1 ♀ (*R. J. H. Kaulback*) [Female paratype in the Zoological Institute, Leningrad].

This new genus shows a well-pronounced affinity to the widely distributed Indo-Malayan and Ethiopian genus *Pseudoglomeris* Brunn., differing from it in the complete absence of elytra and wings in both sexes. The abbreviation or complete disappearance of these organs in the Tibetan Orthoptera and Dermaptera is the most characteristic feature of many species, both tropical or Palaearctic in their origin; the discovery of an additional apterous species is therefore quite natural.

The new species differs clearly in coloration, dimensions, more convex body and in the sculpture of the upper surface from *Pseudoglomeris dubia* and *P. semisulcata* recently described from Yunnan by Dr. Hanitsch (1925, *J. asiat. Soc. Bengal*, (n.s.) **20** : 337–8, ♀♀ only).

There is some probability that Hanitsch's *Pseudoglomeris semisulcata* belongs to the genus *Glomerexis*, but it is impossible to draw a more exact conclusion from the very brief description of Hanitsch's species.

Eupolyphaga yunnanensis Chop.

E. Tibet: Poshö, 9500 ft., 21.vii.1936, 1 ♂, and 12–13,500 ft., 26–31.vi.1936, 1 ♀ (immature ?).—S.E. Tibet: Zayul, 10–12,000 ft., vi.–vii.1935, 1 immature ♂ (all specimens collected by Mr. Kaulback).

A widely distributed Chinese species, known also from S.E. Tibet (Chopard, 1929, *Eos*, **5** : 267).

Eupolyphaga thibetana Chop.

E. Tibet: Poshö, 9–12,000 ft., 12–28.viii.1936, 1 ♂, and Lhodzong Poshö, 12,600 ft., 15.vi.1936, 1 immature ♂ (*Kaulback*).

Known only from Tibet.

Chopard in his Monograph of the Palaearctic Polyphaginae (*loc. cit.*, 1929) described both these species without indicating differences in the armament of the anterior tibiae. A careful study of specimens of both species, as well as of the related *E. sinensis* Walk., however, has shown that they may be easily distinguished by the number of spines on the anterior tibiae and in their arrangement. Dr. B. P. Uvarov, who, at my request, studied the armament of the anterior tibiae in the type specimen of *E. thibetana* (deposited in the British Museum), has informed me that it has only 8 spines; the same number was found by me in the specimens collected by Mr. Kaulback.

These three species may be distinguished by the following key.

1(4). Anterior tibiae armed with 9 spines. Elytra in ♂ distinctly longer, extending beyond apex of abdomen by not less than 12–15 mm.

2(3). Anterior tibiae with 8 apical and subapical spines and with a single isolated median spine placed on the lower margin of the upper (external) surface. Elytra in ♂ with dark spots not isolated, forming continuous dark pattern, with transparent, irregular clear spaces . . 1. *E. sinensis* (Walk.).

3(2). Anterior tibiae with 7 apical and subapical spines and with 2 isolated median spines, one of which is placed on the lower margin and the other on the upper margin of the upper (external) surface. Dark spots of elytra in ♂ small, isolate, dispersed . . . 2. *E. yunnanensis* (Chop.).

4(1). Anterior tibiae armed with 8 spines only. Elytra in ♂ shorter, extending beyond apex of abdomen by less than 10 mm. (Median isolated spine on anterior tibiae present, placed on the lower margin of the upper surface, upper spine absent. Dark spots of elytra in ♂ small, isolate, dispersed.) . . . . . 3. *E. thibetana* Chop.

Dermaptera.

Forficula uvarovi Sem. et B.-Bienko.

Central Tibet: Salween Valley, Bunithang Gompa, 12,500 ft., 17.iv.1936, 2 ♀♀.—E. Tibet: Lhodzong Poshö, 12,600 ft., 15.v.1936, 1 ♂; Poshö, 12–13,000 ft., 26–31.vi.1936, 1 ♂; Poshö, 12–16,000 ft., 18–20.vii.1936, 1 ♂; Poshö, 9–12,000 ft., 2–28.viii.1936, 1 ♀; Shopando, Kham, 12,000 ft., 7.v.1936, 2 ♂♂, 2 ♀♀.—S.E. Tibet: Zayul, 12–13,000 ft., 1–10.x.1936, 2 ♂♂, 4 ♀♀ (all specimens collected by Mr. Kaulback).

I found no differences between the present series of specimens and the typical series deposited in the Zoological Institute of the Academy of Sciences, Leningrad.

This species represents a very peculiar Tibetan endemic, distributed from the Amdo district and the range Burchan-Budda on the North-East to the basins of the rivers Mekong and Yan-tze-kiang in Central and S.E. Tibet.

Forficula sp.

S.E. Tibet: Zayul, 12–13,000 ft., 1–10.x.1936, 1 ♀ (*Kaulback*).

Probably a new species characterised by very short but visible alar squamae.

Anechura (*A.*) *filchneri* Burr.

E. Tibet: Poshö, 12–13,000 ft., 26–31.vi.1936, 1 ♀ (*Kaulback*).

Previously known from the provinces Gan-su and Szechuan, so that its presence in E. Tibet is quite natural.

A Correction.

In the paper by H. K. Munro "New Genera of African Trypetidae (Dipt.)" published last month (*Proc. R. ent. Soc. Lond.* (B) **7**: 117–120) the genotype of *Hendrella* is incorrectly spelt. The correct name is **Aciura caloptera** Loew, 1850.

A NEW COCCID (HEMIPT. HOMOPT.) FROM MAURITIUS

By E. Ernest Green, F.R.E.S., and Raymond Mamet.

Lecanium dorsociliatum sp. n.

Adult female (fig. 1, a) oblong-oval, moderately convex, brownish in colour. Mouth parts small. *Stigmatic clefts* inconspicuous, with three stigmatic spines; median spine stouter. Parastigmatic pores small, arranged in a series connecting the spiracles with the stigmatic clefts. *Margin* (fig. 1, e) closely set with long stout and slightly curved cilia. No submarginal tubercles. *Antennae* (fig. 1, b) 8-segmented. Formula: 3, 5, 4, (2, 8), 6, 7, 1. Antennal setae longish and slender. *Legs* (fig. 1, c) rather longish and narrow. Coxa (of third leg) stouter; nearly as long as femur, the latter equal in length to tibia. Trochanter furnished with a long slender hair. Tarsus shorter than tibia, being two-thirds the length of the latter. Tarsal digitules very slender and long with conspicuously knobbed extremities. Ungual digitules more conspicuous; shorter and stouter than tarsals, longer than claw, with strongly knobbed extremities. Claw acute and small. *Plates* (fig. 1, d) of anal operculum triangular, as shown in the figure. Anal sac very conspicuous. *Anal ring* with long stout hairs which are longer than the anal sac and projecting beyond it. Anal cleft approximately one-fifth of the total length of the body. *Derm* in the paranal region more sclerotised than in the rest of the body, with small oval or round pores. The *dorsum* (fig. 1, a) exhibits three longitudinal series of long stout cilia which are similar to those of the margin. Intermingled with these cilia are small oval *pores*. A few short *spines* are scattered on the frontal and pygidial areas of the dorsum.

Length 3·3 mm. Breadth 1·9 mm.

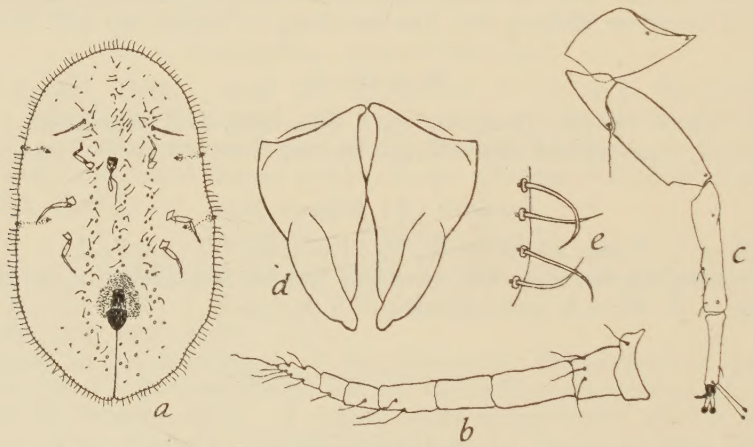


Fig. 1.—*Lecanium dorsociliatum* sp. n. a, adult female showing the longitudinal dorsal series of cilia; b, antenna; c, 3rd leg; d, plates of anal operculum; e, marginal cilia.

Mauritius: Rose Hill. On a fern: *Nephrolepis cordifolia*. xi.1934 (*R. Mamet*).

Remarks: This insect seems to be very rare and has been described from a single adult female. Since it was collected, no other individual has been found in spite of a careful search made in many localities.

A SPECIES OF *SPHAEROCERA* (DIPTERA, SPHAEROCERIDAE) NEW TO BRITAIN

By O. W. Richards, F.R.E.S.

In my paper on the British Sphaeroceridae (1930, *Proc. zool. Soc. Lond.*, **1930** : 318), I recorded two specimens of a rare species under the name *Sphaerocera coronata* Zetterstedt, 1840. This is one of four rare European species which might be regarded as forming an independent group. In 1930 I placed them in the *S. pusilla* Fall. group (fourth vein not bent forwards, slightly recurved distally, scutellum with about 9 teeth); the group of *S. coronata* also shows these characters but in addition differs as follows: mesonotum centrally (at least in front) with a centre stripe consisting of 2–4 longitudinal rows of small warts, separated by a bare stripe from the lateral wart-covered areas; fore coxae black. In the group of *S. pusilla* Fall. *s.s.* the mesonotum is evenly covered with small warts or has at most a fine central bare stripe and the fore coxae are yellow.

Duda (1920, *Tijd. Ent.*, **63** : 1–38) described three species of the *S. coronata* group, for which he used the names *S. coronata* Zetterstedt, *S. crenata* (Meigen) and *S. paracrenata* Duda. In 1921 (in Falcoz, *Bull. Soc. ent. Fr.*, **1921** : 140–2), he described a fourth species, *L. falcozi*. Recently I had the opportunity to examine some flies of this group collected by Mr. E. B. Basden and this has enabled me to clear up certain difficulties in their synonymy.

The following key will assist in separating the European species.

1. Mesonotum shining.
   (Smallest species, L. 2 mm.; ♂ genitalia small; halteres yellow)
   S. micropyga Duda.
–. Mesonotum dull . . . . . 2.
2. ♂ genitalia large; ♀ fifth tergite with a distal excision only extending halfway across tergite. L. 2·5–4 mm.
   (Mesonotum feebly shining; knob of halteres blackish) *S. crenata* (Meigen).
–. ♂ genitalia small; ♀ fifth tergite with the central quarter pale and membranous.
   (Mesonotum quite dull; halteres white or yellowish) . . . . . 3.
3. Length 2–4 mm. Mesonotum with the warts larger, centrally in two regular rows . . . . . *S. paracrenata* Duda.
–. Length 2 mm. Mesonotum with the warts smaller, centrally in two irregular rows . . . . . *S. falcozi* Duda.

All the above species have hitherto been very rare in collections, probably because (as shown below) they are inhabitants of the nests of birds and mammals situated in very damp places. Mr. Basden's collection from nests includes more specimens of this group than were previously known from the whole of Europe.

1. *S. micropyga* Duda, 1938.

nec *Borborus denticulatus* Meigen, 1830 = *Sphaerocera nitida* Duda, 1920.
? *Sphaerocera denticulata* Stenhammar, 1855.
S. denticulata Duda, 1920.

I have not seen any specimens of this species and Stenhammar's type requires re-examination. Duda saw four males (three from Germany and one from Austria). Séguy (1934, *Faune de France*, **28** : 453) has reported on Meigen's type.

2. *S. crenata* (Meigen).

Borborus crenatus Meigen, 1838.
Sphaerocera coronata Zetterstedt, 1838.

Monsieur E. Séguy kindly compared a female which I sent him with Meigen's unique female type in the Paris Museum. Dr. N. A. Kemner also was kind enough to compare the same specimen with Zetterstedt's unique female type at Lund. Meigen recorded the species from Bavaria and Zetterstedt states that it is very rare in Lappland; probably he only saw the single female. Stenhammar (1855) also only described the female. Rondani (1880) received one German specimen from Kowarz, and Engel (Duda, 1921) captured one male at Dachau, Germany.

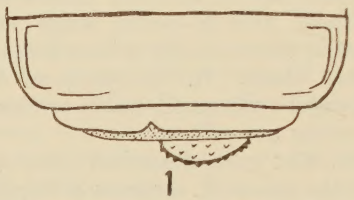


Fig. 1.—Dorsal view of end of abdomen of *Sphaerocera paracrenata* Duda ♂.

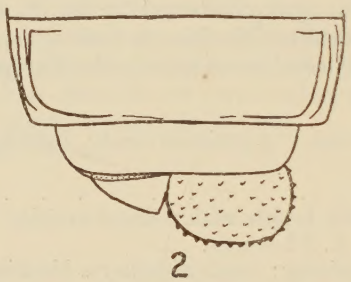


Fig. 2.—The same of *S. crenata* (Meig.) ♂.

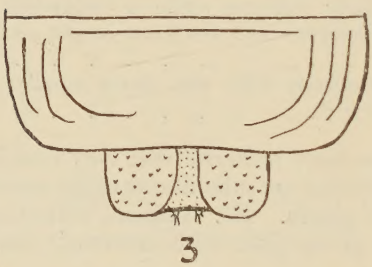


Fig. 3.—The same of *S. paracrenata* ♀.

I have seen the following British specimens: 1 ♂ Suffolk West, Ampton, 13 April '12 (*C. G. Nurse*) [Richards, 1930 : 318]; ♂♀ Bucks, Black Park near Fulmer, 15 May '33 (*E. B. Basden*).

Mr. Basden found his two specimens in the nest of a vole, almost certainly *Microtus agrestis hirtus* (Bellamy). The nest was in a tuft of *Juncus*, the bottom of the nest being about 1½ inches from the ground, the surrounding area being very marshy. The nest contained numerous droppings.

3. *S. paracrenata* Duda, 1920.

Duda described this species from a single female found at Kohlfurt, Germany. In England it seems to be the commonest species, though not hitherto recorded. I have examined the following specimens : ♀ Suffolk West, Barton Mills, 17 April '20 (*J. E. Collin*) [recorded previously as *S. coronata*— Richards, 1930 : 318]; Berks, Temple, ♀ in nest of moorhen (*Gallinula c. chloropus* (L.)), 30 May '31, 3 ♂♂ in nest of water vole (*Arvicola a. amphibius* (L.)), 7 May '32 (*E. B. Basden*); Bucks, Fulmer, ♂ in nest of reed bunting (*Emberiza s. schoeniclus* (L.)), 10 June '32, Black Park, 2 ♂♂, 4 ♀♀ in nest of coot (*Fulica a. atra* (L.)), 25 May '34. 2 ♀♀ reared from the same nest, 26 June and 10 July '34, ♂ in another coot's nest, 25 May '34, ♂♀ in a nest of probably a moorhen (*Gallinula c. chloropus* (L.)) (if not a coot), 21 May '34, ♀ in nest of great crested grebe (*Podiceps c. cristatus* (L.)), 25 May '34 (*E. B. Basden*).

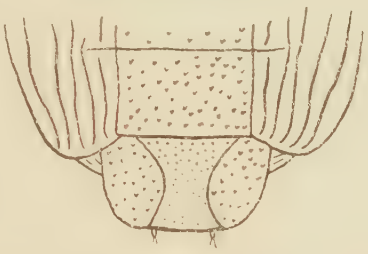


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Fig. 4.—Ventral view of end of abdomen of *S. paracrenata* ♀.

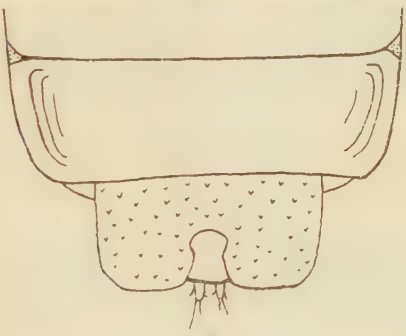

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Fig. 5.—Dorsal view of end of abdomen of *S. crenata* ♀.

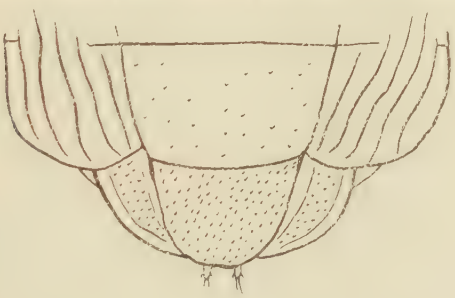

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Fig. 6.—Ventral view of end of abdomen of *S. crenata* ♀.

4. *S. falcozi* Duda *in* Falcoz, 1921.

Falcoz obtained one male in the nest of a kingfisher (*Alcedo atthis ispida* L.) in Dauphiné.

The following notes on the structure of the two British species may be of some help in their identification. The length of the British *S. paracrenata* varies from 2 to 3 mm. The mesonotum has a " dorso-central " row of warts and two " acrostichal " rows; the acrostichal rows are 1–2 warts wide, regular in front. The anal cell is usually a little, only in one female considerably, longer than the posterior basal cell. The halteres are white. In the abdomen of the male (fig. 1) the genitalia are not large, the fifth tergite is narrow, incised on the left of the centre of its distal margin and bordered with a white membrane. In the female, the fifth tergite (fig. 3) and sternite (fig. 4) are both divided by distinct membranous areas. I have not been able to compare these specimens with type of *S. paracrenata*, but I think their identity is fairly certain. Duda describes the female fifth tergite as half as long as the fourth, with a yellowish longitudinal depression in the middle. He also states that the anal cell is much longer than the posterior basal cell; one British specimen shows this character but the others do not.

The British specimens of *S. crenata* are rather larger than *S. paracrenata*, 2·5–4 mm. long. The mesonotum has four irregular rows of warts in the " acrostichal " position; the four rows are not segregated into two groups. The anal cell is hardly longer than the posterior basal cell. The halteres are pale brown with the knob blackish. In the abdomen of the male (fig. 2) the genitalia are very large, the forceps being long and narrow, the fifth tergite is relatively long (about half the length of the fourth), the posterior margin is not excised and there is a very narrow membranous margin on the left side only. In the female, the fifth tergite (fig. 5) has a small, subcircular, posterior emargination and the fifth sternite (fig. 6) is evenly sclerotised throughout.

Book Notice.

Check list of the Cicadellidae (Homoptera) of America, north of Mexico. By D. M. Delong and J. S. Caldwell. Pp. iv + 93, 4to. Ohio (Ohio State University), 1937.

This work is printed in imitation typewriting on one side of the paper and bound in stiff paper wrappers.

The check list extends to 82 pages, in which the species are systematically arranged under genera. It succeeds the last published list of American Cicadellidae published in 1917 by Van Duzee, which it enlarges from 69 genera and 700 species to 145 genera and over 1800 species. The synonymy given by Van Duzee is not repeated but recent synonymy is indicated. Where deemed necessary, reference to the original description is made and this appears to be given in the great majority of cases.

Bibliographical references are made by a number, followed by the volume and page referred to, the number refers to the alphabetical list of journals printed at the end of the volume. By this means references require the minimum space in printing.

A NEW SPECIES OF *APANTELES* (HYM. BRAC.) FROM SOUTH AFRICA

By D. S. Wilkinson, F.R.E.S.

(*Imperial Institute of Entomology.*)

Apanteles caesar sp. n.

♀♂. Black; front femora in about apical half, front tibiae wholly, front tarsi (save for black feet and for some apical darkened segments), middle femora at apex, middle tibiae wholly (save for darkened apex or sometimes apical half), hind trochantines very occasionally, hind femora at apex, hind tibiae (save for darkened apex), all tibial spurs, and the tegulae, red or red testaceous; wings very strongly infumated evenly throughout, and the setae coloured; costal veins (save basally where they are somewhat red testaceous), stigma, and metacarp, dark brown, the remaining veins brown; stigma uniformly opaque.

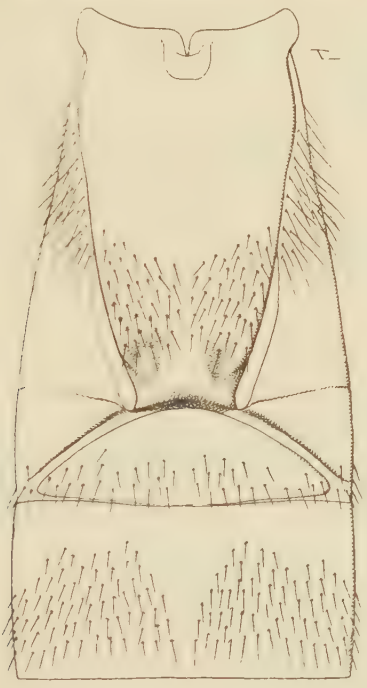

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Fig. 1.—*Apanteles caesar* sp. n., basal tergites, ♀. × 80.

♀♂. *Head*: clypeus and face throughout closely minutely punctate (degree 1); face elongate, the distance from eyes to facial depressions at least 1·5 times as great as distance from apex of clypeus to facial depressions; facial and frontal orbits, frons, and vertex, throughout minutely punctate (degree 1); posterior ocelli equidistant from each other

and the eyes; flagellum of ♀ about equal to combined length of thorax and abdomen, definitely shorter than combined length of head, thorax, and abdomen, of ♂ definitely longer than combined length of thorax and abdomen together with twice the length of the head. *Thorax*: mesonotum and disc of scutellum throughout minutely punctate (degree 1 or 2); the non-excavate area of the lateral faces of the scutellum clearly reaching up well beyond half-way to base of scutellum; propodeon in basal half throughout minutely punctate, in apical half entirely smooth save for some oblique striation along extreme lateral margins and for short striation radiating from the median apical lunule, which is

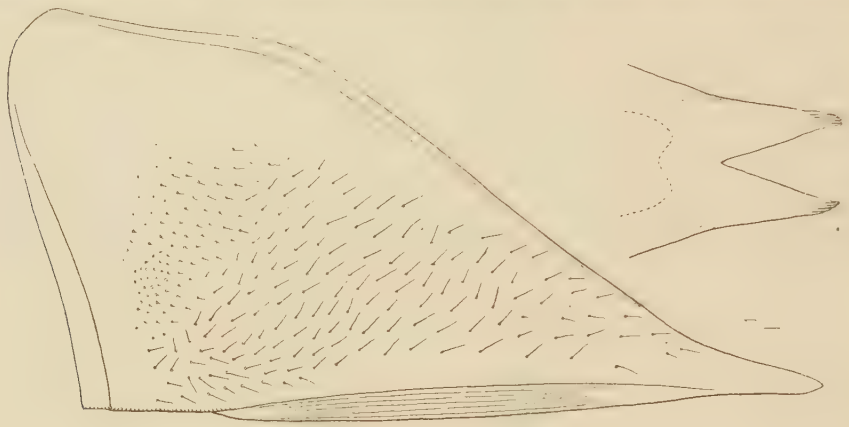

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Fig. 2.—*Apanteles caesar* sp. n., hypopygium, ♀: side view, × 80; and its apex, opened out, dorsal view, further much enlarged, to show apical slit.

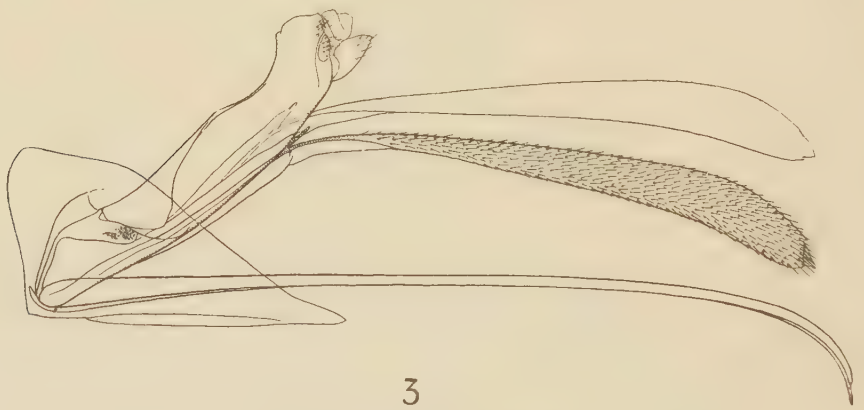

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Fig. 3.—*Apanteles caesar* sp. n., genitalia, ♀. × *c.* 34.

large and strongly raised. *Wings*: metacarp short, equal in length to or even just shorter than the stigma. *Legs*: hind coxae above and on outer faces minutely punctate; the longer hind tibial spur just longer than half, and the shorter spur two-fifths, the length of the basal segment of the hind tarsus. *Abdomen* (figs. 1–3): 1st tergite in about the basal half or three-fifths excavate and smooth, the apical two-fifths turned over and minutely

punctate, across extreme apex smooth, the apical angles with a weak punctiform impression, and the apical lunule weak; 2nd tergite minutely punctate in or throughout the apical half, otherwise smooth, the sulci noticeably more widely divergent in the ♀ and consequently the tergite noticeably broader and shorter than in the ♂; 3rd tergite entirely smooth across base and apex and in a large triangular median basal area, otherwise with very regularly placed, minute punctation; succeeding tergites entirely smooth across base and apex and in a triangular median basal area, otherwise with regularly placed minute punctation, but the smooth triangular area commonly only just indicated; majority of ventrites of ♀ with median longitudinal suture; ovipositor and sheaths elongate, the sheaths as long as the combined length of the hind tibia and the two basal segments of the hind tarsus, the ovipositor as long as the combined length of the hind femur, hind tibia, and four basal segments of the hind tarsus; hypopygium membranously acute.

Length: ♀, 3·7–3·9 mm.; ♂, 4·25 mm.

Described from the following material:—British Museum: S.W. Africa, Aus, 1 ♀ (*type*), 4 ♂♂, xii.1929, S. Africa, Cape Province, Little Karroo, 38 m. E. of Ceres, 2 ♀♀, 1 ♂, 17–25.xi.1924 (*R. E. Turner*).

Type in the British Museum.

Host unknown.

Cocoons unknown.

In my key (1932, *Trans. ent. Soc. Lond.*, **80**, and as subsequently emended) I am running this striking species to couplet 109, which should be altered as follows:—

109.	Ovipositor sheaths definitely longer than hind tibia . . .	109a
	Ovipositor sheaths rather shorter than hind tibia	121
109a.	Face elongate; wings very strongly infumated throughout; S. Africa . . . . . *caesar* Wilkn.	
	Not so describable	110

Book Notice.

Die palearktischen Colletes-*Arten*. By J. Noskiewicz (Prace Naukowe Lwow (**2**) 3). Lwow, 1936. pp. 532, 28 pls., 40 figs.

This book is the first attempt at a systematic revision of the genus *Colletes* (Hymenoptera) of the Palaearctic region.

It gives a detailed description of the genus, followed by a chapter on the geographical distribution of the species, and this is succeeded by the main part devoted to a taxonomic study of the 123 species recognised by the author, who divides the genus into four subgenera, two of which he describes as new. Fifty-six new species are described in the book, and two more in an appendix. Two keys are supplied (one for ♀♀ and one for ♂♂), each of which runs to some 120 couplets.

The description of the species occupies over 400 pages, and is followed by a list of indeterminable species, the index and a supplement giving the description of two further new species received during the printing of the book.

NEW SPECIES AND VARIETIES OF *MISCHOCYTTARUS* (HYMENOPTERA, VESPIDAE)

By J. Bequaert.

(*Museum of Comparative Zoology, Cambridge, Mass.*)

Communicated by O. W. Richards, F.R.E.S.

Mischocyttarus ater var. **uniformis** var. n.

♀. Agrees structurally in every respect with *M. ater* (Olivier), but differs in the colour of the wings. The apical third of the fore-wing is not milky-white as in the typical form of the species, but infuscated throughout, though slightly and gradually paler than the remainder of the wing.

Trinidad, one ♀, holotype, 20.v.1933 (*D. Vesey-FitzGerald*, No. 1952). Holotype in the Museum of Comparative Zoology, Harvard.

I have not seen typical *M. ater* from Trinidad.

Mischocyttarus fitzgeraldi sp. n.

Related and superficially similar to *M. ater* var. *uniformis*, but readily distinguished by the much more slender first abdominal segment.

♀. Head practically as in *M. ater*. Occiput strongly margined. Oculo-malar space at narrowest one-quarter as long as width of antennal socket. Clypeus about one and one-third times as wide as long, with a slight concavity near the weakly projecting, simple, broadly rounded apex. $\frac{POL}{OOL} = \frac{3}{4}$. Mandibles with lower edge sharp for proximal half. Thorax more elongate than in *M. ater*. Pronotum with a lateral fovea; anterior margin sharply raised but not hook-like below, preceded by a slight furrow, the posterior margin of which is obtuse; anterior margin of proepisternum strongly raised; keel of collar strong, more lamellate than in *M. ater*, broadly interrupted medially. Upper division of metapleuron subacutely produced along meso-metapleural suture. Propodeum with the concavity much narrower than in *M. ater*, triangular in outline and not reaching the postscutellum. Mid tibiae with two spurs. Hind tarsi and hind claws as in *M. ater*. Hind-wing with 10 or 11 hamuli. First abdominal segment long and slender in profile, only slightly shorter than the thorax and about one and one-half times the length of the second tergite, gradually and moderately thickened in apical half; seen from above, the basal half is narrow and parallel-sided, the apical half gradually widened, the apex being about three times as wide as the base; the spiracles, placed about midway, form slight, blunt, lateral protuberances. Sculpture and pubescence as in *M. ater*.

Colour almost exactly as in *M. ater* var. *uniformis*. Black, with clypeus, inner and outer orbits and mandibles somewhat blotched with dark ferruginous. Spurs of all tibiae dirty-white. Wings fairly uniformly infuscated, slightly paler over apical third of fore-wing, the extreme tip somewhat whitish.

Length (h.+ th. + t. 1 + 2) : 10·5 to 11 mm.; of fore-wing : 10·5 mm.

Trinidad, ♀ holotype and two ♀♀ paratypes, apparently from the same nest, iii.1935 (*D. Vesey-FitzGerald*, No. 4078). Holotype in British Museum; paratypes in Museum of Comparative Zoology, Harvard.

Mischocyttarus metathoracicus var. **picturatus** var. n.

♀. Agrees structurally with *M. metathoracicus* (H. de Saussure). Head mostly reddish, except for the blackish ocellar area. Pronotum reddish along collar and over vertical sides. Upper corner of mesepisternum (near base of wing) reddish with a small yellow spot. Lower plate of metapleuron reddish. Hind margin of pronotum, sometimes anterior margin of scutellum, postscutellum, two large spots on propodeum, narrow apical margins on all or most of the abdominal segments, spots on the coxae and tips of all femora, pale yellow. Wings as in the typical form.

Length (h. + th. + t. 1 + 2) : 9 mm.; of fore-wing : 9·5 mm.

Brazil : Corumba, Est. Matto Grosso, ♀ holotype (*Herbert Smith*). Chapada, Est. Matto Grosso, ♀ paratype (*Herbert Smith*). Holotype in the Carnegie Museum, Pittsburgh; paratype in the Museum of Comparative Zoology, Harvard.

These two specimens were recorded by Fox (1898, *Proc. Acad. nat. Sci., Philad.* **1898** : 450) as *Polybia rufidens* H. de Saussure. That Mexican species differs, however, from *M. metathoracicus* in many structural characters, notably in the long oculo-malar space and in having the occiput not margined.

A NEW GENUS AND SPECIES OF SUMATRAN REDUVIIDAE (RHYNCHOTA)

By N. C. E. Miller, F.R.E.S., F.Z.S.

(*Entomologist, Department of Agriculture, S.S. and F.M.S.*)

The single specimen for which a new genus has been erected was collected by Mr. C. J. Brooks in Sumatra, and has been deposited in the British Museum (Natural History).

It was hoped that precise information regarding its habitat would be available, but, unfortunately, the collector was unable to give more exact details than that it was captured in jungle country.

In my opinion, its habitus suggests that it may frequent decaying vegetation on the jungle floor or perhaps rotting tree trunks.

This new genus appears to be related to the genus *Physorhynchus* auctt., which it resembles as regards size of the prothorax in comparison with the meso and metathorax together, and also the general form of the abdomen.

Xenorhyncocoris gen. n.

Apterous. Head much longer than thorax; ocelli absent; rostrum extending beyond anterior coxae. Antennae a little longer than head. Prothorax about four times as long as meso and metathorax together; prosternum strongly acutely produced posteriorly. Abdomen broadly dilated; 1st abdominal spiracle visible from above. Anterior and median tibiae with a short spongy furrow.

Genotype : *Xenorhyncocoris caraboides* sp. n.

Xenorhyncocoris caraboides sp. n. (fig. 1).

Colour. Dark piceous, paler ventrally. Segments 3 and 4 of antennae pale castaneous. Tarsi castaneous. Produced portion of prosternum fulvous; stridulatory furrow reddish castaneous. *Structure.* Antennae; segment 1 feebly curved, thicker apically than basally, 4 mm.; segment 2 feebly curved, slender, feebly setose in apical half, 6 mm.;

segments 3 and 4 together cylindrical, somewhat densely setose, together approximately 1·5 mm.; there appears to be a rudimentary segment between 2 and 3 and 3 and 4. *Eyes* small, feebly prominent, reniform. *Head* broader in front than behind eyes; surface transversely rugulose; antennal tubercles prominent; clypeus in basal half with sub-parallel, feeble, longitudinal sulci sub-dorsally; gular region regularly transversely sulcate; 1st segment of rostrum sinuate in profile, strongly dorso-ventrally compressed; 2nd segment incrassate, sub-quadrate in cross section; 3rd segment short, strongly constricted laterally, basally. *Thorax*: anterior lobe globose, rugulose in basal half, remainder smooth; longitudinally, arcuately sulcate laterally and sub-laterally, narrowly longitudinally sulcate mid-dorsally; scutellum with a short conical tubercle apically laterally; apex of produced

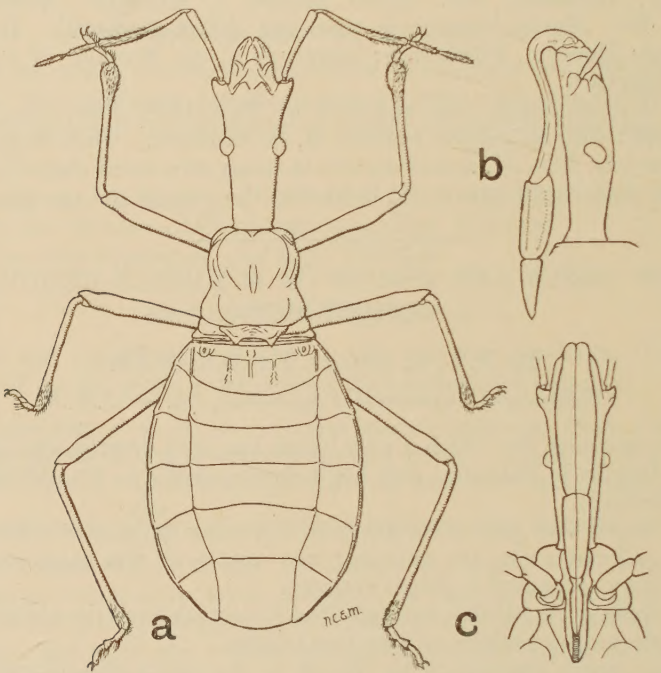

Fig. 1.—*Xenorhyncocoris caraboides* sp. n. a, from above; b, head from the side; c, head from below.

portion of prosternum extending to posterior margin of median coxal cavities, margins finely setose; metathoracic gland ostiole circular, adjacent to anterior margin of posterior coxal cavity, sub-ventrally. *Abdomen* in outline ovate; connexival areas broadly dilated and strongly deflected upwards, longitudinally sulcate laterally; segment 2 with short longitudinal carinae dorsally and sub-dorsally; surface dorsally and ventro-laterally rugulose, mid-ventrally smooth; intersegmental areas between segments 2–5 with short longitudinal carinae. *Legs* somewhat slender; femora constricted apically; anterior and median tibiae thickened apically and with an ovate spongy furrow; tibiae densely setose on inner surface apically; tarsi with short and long setae on inner surface.

Total length 37·0 mm. Length of head 14·0 mm.

Described from 1 (type). W. Sumatra: Lebong Tandai, 1920–23 (*C. J. Brooks*).